

| | | | | | | | | | | | | | | | | | | |
|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 5' | NNT | CAA | AGC | CAG | CTG | AAG | GAA | AGA | GGA | AGT | GCT | AGA | GAG | AGC | CCC | CTT | CAG | TGT |
| | 9 | | 18 | | 27 | | 36 | | 45 | | 54 | | | | | | | |
| | 63 | | 72 | | 81 | | 90 | | 99 | | 108 | | | | | | | |
| | GCT | TCT | GAC | TTT | TAC | GGA | CTT | GGC | TTG | TTA | GAA | GGC | TGA | AAG | ATG | ATG | GCA | GGA |
| M | K | I | Q | L | V | C | M | L | L | A | F | S | S | W | S | L | M | M |
| | 117 | | 126 | | 135 | | 144 | | 153 | | 162 | | | | | | | |
| | ATG | AAA | ATC | CAG | CTT | GTA | TGC | ATG | CTA | CTC | CTG | GCT | TTC | AGC | TCC | TGG | AGT | CTG |
| C | S | D | S | E | E | GAA | GAA | ATG | AAA | GCA | TTA | GAA | GCA | GAT | TTC | TTG | ACC | AAT |
| | 171 | | 180 | | 189 | | 198 | | 207 | | 216 | | | | | | | |
| | TGC | TCA | GAT | TCA | GAA | GAG | GAA | ATG | AAA | GCA | TTA | GAA | GCA | GAT | TTC | TTG | ACC | AAT |
| M | H | T | S | K | I | S | K | M | K | A | L | E | A | D | F | L | T | N |
| | 225 | | 234 | | 243 | | 252 | | 261 | | 270 | | | | | | | |
| | ATG | CAT | ACA | TCA | AAG | ATT | AGT | AAA | GCA | CAT | GTT | CCC | TCT | TGG | AAG | ATG | ACT | CTG |
| L | N | V | C | S | L | V | N | N | L | N | P | S | W | K | M | T | L | D |
| | 279 | | 288 | | 297 | | 306 | | 315 | | 324 | | | | | | | |
| | CTA | AAT | GTT | TGC | AGT | CTT | GTA | AAT | TTG | AAC | AGC | CCA | GCT | GAG | GAA | ACA | GGA | |
| E | V | H | E | E | E | L | V | A | R | R | K | L | P | T | A | L | D | |
| | 333 | | 342 | | 351 | | 360 | | 369 | | 378 | | | | | | | |
| | GAA | GTT | CAT | GAA | GAG | GAG | CTT | GTT | GCA | AGA | AGG | AAA | CTT | CCT | ACT | GCT | TTA | GAT |

FIGURE 1A

| | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 387 | GGC | TTT | AGC | TTG | GAA | GCA | ATG | TTG | ACA | ATA | TAC | CAG | CTC | CAC | AAA | ATC | TGT | CAC | 432 |
| G | F | S | L | E | A | M | L | T | I | Y | Q | L | H | K | I | C | H | | |
| 441 | AGC | AGG | GCT | TTT | CAA | CAC | TGG | GAG | TTA | ATC | CAG | GAA | GAT | ATT | CTT | GAT | ACT | GGA | 486 |
| S | R | A | F | Q | H | W | E | L | I | Q | E | D | I | L | D | T | G | | |
| 495 | AAT | GAC | AAA | AAT | GGA | AAG | GAA | GTC | ATA | AAG | AGA | AAA | ATT | CCT | TAT | ATT | CTG | | 540 |
| N | D | K | N | G | K | E | E | V | I | K | R | K | I | P | Y | I | L | | |
| 549 | AAA | CGG | CAG | CTG | TAT | GAG | AAT | AAA | CCC | AGA | AGA | CCC | TAC | ATA | CTC | AAA | AGA | GAT | 594 |
| K | R | Q | L | Y | E | N | K | P | R | R | P | Y | I | L | K | R | D | | |
| 603 | TCT | TAC | TAT | TAC | TGA | GAG | AAT | AAA | TCA | TTT | ATT | TAC | ATG | TGA | TTG | TGA | TTC | ATC | |
| S | Y | Y | Y | | | | | | | | | | | | | | | | |
| 657 | ATC | CCT | TAA | TTA | AAT | ATC | AAA | TTA | TAT | TTG | TGT | GAA | AAT | GTG | ACA | AAC | ACA | CTT | 702 |
| 711 | ATC | TGT | CTC | TTC | TAC | AAT | TGT | GGT | TTA | TTG | AAT | GTG | ATT | TTT | CTG | CAC | TAA | TAT | 756 |

FIGURE 1B

| | | | | | | | | | | | | | | | | | |
|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|-----|-----|-----|-----|-----|-----|
| AAA | TTA | GAC | TAA | GTG | TTT | TCA | AAT | AAA | TCT | AAA | TCT | TCA | GCA | TGA | TGT | GTT | GTG |
| 819 | | 828 | | 837 | | 846 | | 855 | | 864 | | | | | | | |
| TAT | AAT | TGG | AGT | AGA | TAT | TAA | TTA | AGT | CAC | CTG | TAT | AAT | GTT | TTG | TAA | TTT | TGC |
| 873 | | 882 | | 891 | | 900 | | 909 | | 918 | | | | | | | |
| AAA | ACA | TAT | CTT | GAG | TTG | TTT | AAA | CAG | TCA | AAA | TGT | TTC | ATA | TTT | TAT | ACC | AGC |
| 927 | | 936 | | 945 | | 954 | | 963 | | 972 | | | | | | | |
| TTA | TGA | GCT | CAA | AGT | ACT | ACA | GCA | AAG | CCT | AGC | CTG | CAT | ATC | ATT | CAC | CCA | AAA |
| 981 | | 990 | | 999 | | 1008 | | 1017 | | 1026 | | | | | | | |
| CAA | AGT | AAT | AGC | GCC | TCT | TTT | ATT | TTG | ACT | GAA | TGT | TTT | ATG | GAA | TTG | AAA | |
| 1035 | | 1044 | | 1053 | | 1062 | | 1071 | | 1080 | | | | | | | |
| GAA | ACA | TAC | GTT | CTT | TTC | AAG | ACT | TCC | TCA | TGA | ATC | TCT | CAA | TTA | TAG | GAA | AAG |
| 1089 | | 1098 | | 1107 | | 1116 | | 1125 | | 1134 | | | | | | | |
| TTA | TTG | TGA | TAA | AAT | AGG | AAC | AGC | TGA | AAG | ATT | GAT | TAA | TGA | ACT | ATT | GTT | ATT |
| 1143 | | 1152 | | 1161 | | 1170 | | 1179 | | 1188 | | | | | | | |
| ACT | TCC | TAT | TTT | AAT | GAA | TGA | CAT | TGA | ACT | GGA | TTT | GAC | CTG | TTA | ATG | GAC | |
| 1197 | | 1206 | | 1215 | | 1224 | | 1233 | | 1242 | | | | | | | |
| TTG | GTA | GCT | ATT | AGA | AGG | ACA | CTT | GAC | CTC | CAA | TAG | AAA | AAA | AAT | AAA | GAA | ATA |

FIGURE 1C

1251 1260 1269 1278 1287 1296
AAA AGA AGT ATA AAA GTA ATA AAA TAA AAT CAG AAG AGA AAA AGA AAA AGA AAA

1305 1314 1323 1332 1341 1350
GTA AAA AGA GGG GGG ACA CAC CAT AAC AAG CAA TAC CCG GGA ATT TTC GGA GCG

A 3'

FIGURE 1D

| | | | |
|-----|---|---|-------------------------------|
| 1 | M M A G M K I Q L V C M 1 -A G M K I Q L V C M 1 M I -G M N L Q L V C L | L L A F S S W S L C S D S E E M K A L E A D E F L T N L L A F S S W S L C S D S E E M K A L E T D L L T N L L A F S S W S L C S D S E E D V R A L E A D L L T N | HPPN GI 163424 GI 92546 |
| 41 | M H T S K I S K A H V P S W K M T L L N V C S L 40 M H T S K I S K A S V P S W K M S L L N V C S L I N N L N S 40 M H A S K V S K G S P P S W K M T L L N V C S L I N N L N S | V V N N L N S P A E E T G E V H E Q A E E T G E F H E A A E E A G E M R D | HPPN GI 163424 GI 92546 |
| 81 | E E L V A R R K L P T A L D G F S L E A M L T I Y Q L H 80 E E L I T R R K F P A A L D G F S L E A M L T I Y Q L Q K I C H S R A F Q H W E 80 D D L V A K R K L P L V L D D F S L E A L L T V F O L Q K I C R S R A F Q H W E | K I C H S R A F Q H W E K I C H S R A F Q H W E K I C R S R A F Q H W E | HPPN GI 163424 GI 92546 |
| 121 | L I Q E D I L D T G N D K N G K E E V I K R K I P Y I I L K R Q L Y E N K P R R P 120 L I Q E D I L D A G N D K N E K E E V I K R K I P Y I I L K R Q L Y E N K P R R P 120 I I Q E D I L D H G N E K T E K E E V I K R K I P Y I I L K R Q L Y E N K P R R P | | HPPN GI 163424 GI 92546 |
| 161 | Y I L K R D S Y Y Y 160 Y I L K R G S Y Y Y 160 Y I L K R A S Y Y Y | | |

FIGURE 2